REMARKS

In the Office Action, claims 1-9, 13-19 and 22-25 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,833,623 to *Mann et al.* in view of U.S. Patent No. 5,549,654 to *Powell.*

In the Office Action, claims 10-12 and 21 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,833,623 to *Mann et al.* in view of U.S. Patent No. 5,549,654 *to Powell* and further in view of U.S. Patent No. 5,861,012 to *Stroebel.*

Following is a discussion of the patentability of each of the pending claims.

Interview Summary Record

Counsel thanks Examiner Oropeza for the courtesy extended during a telephonic interview on January 10, 2005. Agreement was not reached regarding the allowability of the pending claims.

Independent Claim 1

Claim 1 recites a system for automating review of capture verification. The system comprises a control means for generating an electrogram having a visual representation of the presence and absence of a captured cardiac event. The control means comprises means for marking the captured cardiac event in the visual representation with a text marker representative of capture and means for marking absence of the captured cardiac event with a text marker representative of absence of capture in a location in the visual representation where the captured cardiac event was expected to occur.

The *Mann et al.* reference discloses a programmer to perform automated and customized follow-up examination of a patient having an implantable device. The Office Action states that Figure 2 discloses an electrogram having a marker representative of capture and a marker representative of absence of the capture cardiac event. Figure 2 does not disclose or suggest markers representing captured or absence of captured cardiac events. Element 202 of Figure 2 refers to a real-time data display panel that

displays ECG and IEGM signals. The real-time data display includes markers displaying the sweep speed (25 mm/sec) and heart rate (70 bpm). Nowhere does Figure 2 include markers illustrating capture and absence of capture. The Office Action further refers to column 8, line 65 through column 9, line 2. This portion of the specification states that "... real-time data display 202 displays the ECG and IEGM signals (including markers) ..." However, this portion of the specification does not disclose the manner in which the markers are displayed with respect to the ECG and IEGM signals. It appears that displays prior to the filing date of the present application include a display illustrating markers and a separate display illustrating electrogram waveforms. For example, Figure 3 of the present application illustrates a marker display, an atrial channel display, and a ventricular channel display. The markers are not part of the atrial and ventricular channel displays such that an operator is required to "mentally align" a marker from the marker display to a corresponding cardiac event displayed in either the atrial and/or ventricular channel display. What is recited in claim 1 of the present application are the "CAPTURE" AND " and "NO CAPTURE" markers illustrated in the atrial channel display of Figure 3. These markers are in the atrial channel display such that mental alignment is not necessary. Thus, nowhere does the *Mann et al.* reference disclose or suggest an electrogram having a marker representative of capture and absence of capture.

The *Powell* reference discloses an implantable device which communicates with an external programmer. The external programmer is capable of displaying ten-second intervals of ECG data and a corresponding Marker Channel Diagram. An example of an ECG waveform and Marker Channel Diagram is illustrated in Figure 3. In an ECG field (102), a ten-second portion of patient ECG data is displayed. Also appearing in the ECG field are pacing artifacts (104). Below the ECG field is the Marker Channel Diagram field (106). The Marker Channel Diagram is formed by a series of lines and symbols that depict pacemaker operation. Symbols depicting atrial events appear along the top side of a baseline (108) and symbols depicting ventricular events appear along a bottom side of a baseline (110). Between the baselines is a diagram depicting the timing relationship between atrial and ventricular events. The Marker Channel Diagram further includes an explanatory text box. The text in the box explains what situation is represented by the

Marker Channel Diagram in the section selected by the user. In the particular example depicted in Figure 7, the section selected is an upward sloping line between a ventricular pace event and an atrial pace event. Accordingly, the text in the box (156) indicates that "This is a ventricular pace to atrial pace at the V-A escape time."

The *Powell* reference does not disclose or suggest a control means for generating an electrogram having a visual representation of the presence and absence of a captured cardiac event, wherein control means comprises means for marking the captured cardiac event in the visual representation with a text marker representative of capture and means for marking absence of the captured cardiac event with a text marker representative of absence of capture in a location in the visual representation where the captured cardiac event was expected to occur. In the *Powell* reference, the ECG field does not include text markers to identify cardiac events. As described above, the Marker Channel Diagram does include text markers to identify various cardiac events. However, the Marker Channel Diagram does not include the display of an electrogram. The Marker Channel Diagram is formed by a series of lines and symbols that depict pacemaker operation.

The *Stroebel* reference is cited because it discloses a capture detection and threshold-measurement system in which a safety margin is added to the pacing threshold value. The *Stroebel* reference does not disclose or suggest a visual representation with a text marker representative of capture and a text marker representative of absence of capture in a location in the visual representation where the captured cardiac event was expected to occur.

Accordingly, it is respectfully submitted that claim 1 is in condition for allowance.

Dependent Claims 2-8, 10-14, and 23

Claims 2-8, 10-14, and 23 depend from claim 1 and are similarly patentable. Accordingly, it is respectfully submitted that these claims are in condition for allowance.

Independent Claim 15

For at least the same reasons discussed above with regards to claim 1, it is respectfully submitted that claim 15 is in condition for allowance.

Dependent Claim 24

Claim 24 depends from claim 15 and is similarly patentable. Accordingly, it is respectfully submitted that claim 24 is in condition for allowance.

Independent Claim 16

For at least the same reasons discussed above with regards to claim 1, it is respectfully submitted that claim 16 is in condition for allowance

Dependent Claims 17-19 and 21

Claims 17-19 and 21 depend from claim 16 and are similarly patentable. Accordingly, it is respectfully submitted that these claims are in condition for allowance.

Independent Claim 22

For at least the same reasons discussed above in regards to claim 1, it is respectfully submitted that claim 22 is in condition for allowance.

Dependent Claim 25

Claim 25 depends from claim 22 and is similarly patentable. Accordingly, it is respectfully submitted that claim 25 is in condition for allowance.

PATENT

CONCLUSION

In light of the above remarks, it is respectfully submitted that the application is in condition for allowance, and an early notice of allowance is requested.

Respectfully submitted,

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Date

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